CLAIMS (AS AMENDED IN PLAIN TEXT FORM)

1. (Currently Amended) An element for calibrating fluorescent light emissions comprising:

a body having a plurality of regions suitably simultaneously to induce fluorescence, so as to fluoresce at a corresponding plurality of fluorescent light emission intensities, certain regions appearing to fluoresce relatively more brightly while other regions appear to fluoresce relatively less brightly;

wherein when the body is illuminated and imaged in a same image field and along with a macroscopic specimen also exhibiting fluorescence at multiple areas and intensities then the body serves as an image calibration step web, or gauge, where any of intensities, colors, dimension, overall brightness, and color temperature of any and all of the multiple specimen fluorescent areas may be determined to be properly so imaged, meaning that the each and all specimen areas are imaged so as to show other than black, or no image, but less than saturation;

wherein, by comparison to the body that is within a same image, illumination of the specimen may be adjusted so that the full range of all its fluorescent emissions, dim to bright, are captured within a single image.

2. (Original) The fluorescent light emissions calibration element according to claim 1 wherein the body comprises:

a substantially planar substrate; and

at least one fluorescent substance within the substrate; and

one or more coatings applied to different effect in the plurality of areas of the substrate so that the different ones of these plurality of substrate regions will, upon exposure to radiation sufficient to induce fluorescent emissions of the fluorescent substance, appear to fluoresce relatively more brightly while other regions will appear to fluoresce relatively less brightly.

3. (Original) The fluorescent light emissions calibration element according to claim 2

wherein the same coating is applied at various thickness to different ones of the plurality of areas of the fluorescent-substance-containing substrate so that relatively less thickly coated regions of the fluorescent-substance-containing substrate will, upon exposure to radiation sufficient to induce fluorescent emissions of the fluorescent substance, appear to fluoresce relatively more brightly while relatively more thickly coated regions of the fluorescent-substance-containing substrate will, upon exposure to the same radiation sufficient to induce fluorescent emissions of the fluorescent substance, appear to fluoresce relatively less brightly.

4. (Original) The fluorescent light emissions calibration element according to claim 2 wherein the substantially planar substrate comprises:

glass.

5. (Original) The fluorescent light emissions calibration element according to claim 2 wherein the substantially planar substrate comprises:

plastic.

6. (Original) The fluorescent light emissions calibration element according to claim 2 wherein the fluorescent substance comprises:

a fluorescent chemical.

7. (Original) The fluorescent light emissions calibration element according to claim 2 wherein the fluorescent substance comprises:

quantum dots.

8. (Original) The fluorescent light emissions calibration element according to claim 2 wherein at least one coating comprises:

nickel chrome.

9. (Original) The fluorescent light emissions calibration element according to claim 2

wherein at least one coating is so applied in various regions to the substrate at the variable extent by dint of being applied to the substrate in multiple regions at a first time, and to be re-applied to less than all of the multiple regions upon at least one more, second, time;

wherein the at least one coating is more abundant in those of the multiple regions whereat it has been applied at least two times than any regions whereat it has been applied but one time.

10. (Original) The fluorescent light emissions calibration element according to claim 9

wherein the at least one coating is so applied in various regions to the substrate at the variable extent by dint of being applied and re-applied to the substrate in each of multiple regions for a variable number of times;

wherein accumulations of the coating will be greatest in those regions of the substrate whereat the coating has been applied multiple times.

11. (Original) An apparatus for illuminating a macroscopically-sized specimen for observation along a viewing axis, the apparatus comprising:

a stage for supporting a specimen to be observed; a first illumination source of first radiation of a first color; a second illumination source of second radiation of a second color, different from the first color;

an element for calibrating fluorescent light emissions induced by each of the first and the second radiations, the element having

a body having a plurality of regions that fluoresce under illumination to a corresponding plurality of fluorescent light emission intensities, certain regions appearing to fluoresce relatively more brightly while other regions appear to fluoresce relatively less brightly,

12. (Original) The apparatus according to claim 11 further comprising:

a first sensor sensing induced fluorescent radiation emission from a region of the element that is responsive to the first radiation to fluoresce so as to produce a first signal; and

a first control circuit, responsive to the first signal, for controlling the first radiation output of the radiation source so that this radiation output is relatively greater when the induced fluorescent radiation emission of the element is sensed by the first sensor to be relatively less, and is relatively lesser when the induced fluorescent radiation emission of element is sensed by the first sensor to be relatively greater.

13. (Original) The apparatus according to claim 12 further comprising:

a second sensor sensing induced fluorescent radiation emission from a region of the element that is responsive to the second radiation to fluoresce so as to produce a second signal; and

a second control circuit, responsive to the second signal, for controlling the second radiation output of the radiation source so that this radiation output is relatively greater when the induced fluorescent radiation emission of the element is sensed by the second sensor to be relatively less, and is relatively lesser when the induced fluorescent radiation emission of element is sensed by the second sensor to be relatively greater.